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ANALYSIS OF CONTRACTS AWARDED
CALENDAR YEAR 1972

PREPARED BY THE

STATE OF MONTANA
DEPARTMENT OF HIGHWAYS
PLANNING AND RESEARCH BUREAU

IN COOPERATION WITH THE

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

CONTRACT ANALYSES
Calendar Year 1972

FOREWORD

The attached tabulations have been prepared from the Detailed Estimate and Contract Award sheet for all contracts awarded during the calendar year 1971. A brief explanation of each of the following tables is provided to help in the interpretation of the figures and to lessen the possibility of erroneous conclusions.

Table 1 - Summary of New and Reconstructed Roadway Only, by County and Financial District.

This table is intended to inform the user of how many actual miles of roadway were let to contract and the costs involved. It includes all items pertinent to the same section of roadway except structures.

Table 1A - Summary of Total Amounts Awarded by County and Financial District.

This table is a total of all miles and costs involved regardless of the type of project. Besides roadway costs, it includes signing, lighting, fencing and bridge projects.

Table 2 - Summary of Roadway Mileage Awarded by Systems.

The table involves the same type of construction as Table 1. Table 2, however, provides a cost per mile figure for the different systems and also provides a simple analysis of benefits by inclusion of the "cost per annual vehicle mile."

Table 3-3A-3B-3C-3D - Summary of Type of Construction.

A separate table has been prepared for each Federal Aid System with all projects including signing and Fencing classified into 10 different categories. The purpose of this table is to give a general indication of what type of construction is responsible for the major share of monies spent. For example, note the bulk of Interstate monies is spent for New Construction, whereas, the greater share for Primary and Secondary is spent for Reconstruction.

Table 4-4A-4C - Summary by Surface Type by Systems.

These tables indicate the average cost per mile of various items included in a completed roadway by type of surfacing. Caution should be exercised in using the average cost per mile data due to the small sample involved for some cost items.

Table 5 - Summary of Roadway Mileage Awarded by Number of Traffic Lanes.

This table deals with the same miles and costs involved in Tables 1 and 2.

Table 6-6A-6C-6D - Summary of Structures by Type.

These tables summarize the number of structures let by type and also provide a cost per square foot, by type of structure.

Table 7-7A-7B-7C-7D - Summary of Roadway Mileage Awarded by ADT.

The table involves only actual roadway constructed, as Tables 1,2 and 5 and provides a relationship between the volumes of traffic, miles constructed and costs. It is possible to further develop this table to obtain a road user benefit on a vehicle mile basis.

Table 8 - Summary of Contracted and Non-contracted Costs by System.

Some items, such as railroad flagging, roadway materials, detours and traffic control devices are considered non-contract items in certain instances. The costs of such items are included in the Detailed Estimate, but not in the Contract Award Amount. This table tabulates the two costs for the users information.

STATE OF MONTANA DEPARTMENT OF HIGHWAYS
PLANNING AND RESEARCH BUREAU

SUMMARY OF ROADWAY MILEAGE AWARDED
BY COUNTY AND FINANCIAL DISTRICT
DURING CALENDAR YEAR 1972

THIS TABLE SUMMARIZES ONLY NEW OR RECONSTRUCTED ROADWAY. REFER TO TABLE 1A FOR THE TOTAL AMOUNTS OF CONTRACTS AWARDED

JUNE 05, 1973

TABLE 1

COUNTY AND	INTERSTATE SYSTEM		PRIMARY SYSTEM		SECONDARY SYSTEM		OTHER SYSTEMS		ALL SYSTEMS	
FINANCIAL DISTRICT	MILES	COST	MILES	COST	MILES	COST	MILES	COST	MILES	COST
LAKE			.865	102,152					.865	102,152
FD #01			.865	102,152					.865	102,152
HILL					.161	170,370			.161	170,370
TOOLE					5.926	626,883			5.926	626,883
FD #02					6.087	797,253			6.087	797,253
ROOSEVELT					5.848	515,894			5.848	515,894
VALLEY			.007	113,507					.007	113,507
FD #03			.007	113,507	5.848	515,894			5.855	629,401
DAWSON	6.823	2,266,395							6.823	2,266,395
RICHLAND			10.147	2,554,733					10.147	2,554,733
FD #04	6.823	2,266,395	10.147	2,554,733					16.970	4,821,128
GARFIELD			14.978	2,705,439					14.978	2,705,439
PETROLEUM			1.606	220,667					1.606	220,667
FD #05			16.584	2,926,106					16.584	2,926,106
PONDERA					26.848	1,276,159			26.848	1,276,159
TETON					6.460	601,313	2.435	90,740	8.895	692,053
FD #06					33.308	1,877,472	2.435	90,740	35.743	1,968,212
MINERAL	10.784	5,533,558							10.784	5,533,558
POWELL	7.014	1,169,186							7.014	1,169,186
RAVALLI					1.835	352,822			1.835	352,822
FD #08	17.798	6,702,744			1.835	352,822			19.633	7,055,566
BEAVERHEAD	2.908	1,239,559	.407	257,605					3.315	1,497,164
MADISON	7.425	2,549,301			3.950	674,634			11.375	3,223,935
SILVER BOW	9.485	3,403,822							9.485	3,403,822
FD #09	19.818	7,192,682	.407	257,605	3.950	674,634			24.175	8,124,921
PARK			8.381	1,059,178					8.381	1,059,178
FD #10			8.381	1,059,178					8.381	1,059,178
BIG HORN			.776	270,440	20.898	814,200	1.644	103,008	23.318	1,187,648
YELLOWSTONE	3.726	1,603,266							3.726	1,603,266
FD #11	3.726	1,603,266	.776	270,440	20.898	814,200	1.644	103,008	27.044	2,790,914

STATE OF MONTANA DEPARTMENT OF HIGHWAYS
PLANNING AND RESEARCH BUREAU

SUMMARY OF ROADWAY MILEAGE AWARDED
BY COUNTY AND FINANCIAL DISTRICT
DURING CALENDAR YEAR 1972
THIS TABLE SUMMARIZES ONLY NEW OR RECONSTRUCTED ROADWAY. REFER TO TABLE 1A FOR THE TOTAL AMOUNTS OF CONTRACTS AWARDED
JUNE 05, 1973

TABLE 1

COUNTY AND FINANCIAL DISTRICT	INTERSTATE SYSTEM MILES	INTERSTATE SYSTEM COST	PRIMARY SYSTEM MILES	PRIMARY SYSTEM COST	SECONDARY SYSTEM MILES	SECONDARY SYSTEM COST	OTHER SYSTEMS MILES	OTHER SYSTEMS COST	ALL SYSTEMS MILES	ALL SYSTEMS COST
CUSTER	10.848	2,816,792	6.162	1,214,073					17.010	4,030,865
POWDER RIVER					.845	135,073			.845	135,073
ROSEBUD	7.156	1,455,332							7.156	1,455,332
FD #12	18.004	4,272,124	6.162	1,214,073	.845	135,073			25.011	5,621,270
TOTAL	66.169	22,037,211	43.329	8,497,794	72.771	5,167,348	4.079	193,748	186.348	35,896,101

STATE OF MONTANA DEPARTMENT OF HIGHWAYS
PLANNING AND RESEARCH BUREAU
SUMMARY OF TOTAL AMOUNTS AWARDED
BY COUNTY AND FINANCIAL DISTRICT
DURING CALENDAR YEAR 1972
TABLE 1A

JUNE 05, 1973

COUNTY AND FINANCIAL DISTRICT	INTERSTATE SYSTEM		PRIMARY SYSTEM		SECONDARY SYSTEM		OTHER SYSTEMS		ALL SYSTEMS	
	MILES	COST	MILES	COST	MILES	COST	MILES	COST	MILES	COST
FLATHEAD				228,792		101,924				330,716
LAKE			.865	168,919	9.544	277,226		56,010	10.409	502,155
FD #01			.865	397,711	9.544	379,150		56,010	10.409	832,871
BLAINE			7.314	241,936					7.314	241,936
GLACIER			11.641	391,585					11.641	391,585
HILL					.161	789,733			.161	789,733
TOOLE					5.926	779,477			5.926	779,477
FD #02			18.955	633,521	6.087	1,569,210			25.042	2,202,731
ROOSEVELT				80,160	5.848	515,894			5.848	596,054
VALLEY			.007	213,868					.007	213,868
FD #03			.007	294,028	5.848	515,894			5.855	809,922
DAWSON	6.823	2,454,247							6.823	2,454,247
MC CONE				38,093						38,093
PRAIRIE		26,747								26,747
RICHLAND			10.147	2,966,026	8.968	341,719			19.115	3,307,745
WIBAUX		656,853								656,853
FD #04	6.823	3,137,847	10.147	3,004,119	8.968	341,719			25.938	6,483,685
FERGUS					13.704	743,990			13.704	743,990
GARFIELD			14.978	3,058,033					14.978	3,058,033
PETROLEUM			1.606	376,906					1.606	376,906
FD #05			16.584	3,434,939	13.704	743,990			30.288	4,178,929
CASCADE			.081	161,438				345,741	.081	507,179
PONDERA					26.848	1,319,702			26.848	1,319,702
TETON					6.460	601,313	2.435	90,740	8.895	692,053
FD #06			.081	161,438	33.308	1,921,015	2.435	436,481	35.824	2,518,934
BROADWATER								10,936		10,936
JEFFERSON		11,000								11,000
LEWIS & CLARK		39,059								39,059
FD #07		50,059						10,936		60,995
GRANITE		270,673								270,673
MINERAL	10.784	5,533,558							10.784	5,533,558
MISSOULA		760,359		17,523				21,856		799,738
POWELL	7.014	1,582,487							7.014	1,582,487
RAVALLI					1.835	840,526			1.835	840,526
FD #08	17.798	8,147,077		17,523	1.835	840,526		21,856	19.633	9,026,982

STATE OF MONTANA DEPARTMENT OF HIGHWAYS
PLANNING AND RESEARCH BUREAU
SUMMARY OF TOTAL AMOUNTS AWARDED
BY COUNTY AND FINANCIAL DISTRICT
DURING CALENDAR YEAR 1972
TABLE 1A

JUNE 05, 1973

COUNTY AND FINANCIAL DISTRICT	INTERSTATE SYSTEM MILES	INTERSTATE SYSTEM COST	PRIMARY SYSTEM MILES	PRIMARY SYSTEM COST	SECONDARY SYSTEM MILES	SECONDARY SYSTEM COST	OTHER SYSTEMS MILES	OTHER SYSTEMS COST	ALL SYSTEMS MILES	ALL SYSTEMS COST
BEAVERHEAD	23.458	4,113,125	.407	495,147		5,425			23.865	4,613,697
MADISON	7.425	2,834,121			3.950	914,196			11.375	3,748,317
SILVER BOW	9.485	4,196,245	.510	113,232	-------	-----------	-------	-----------	9.995	4,309,477
FD #09	40.368	11,143,491	.917	608,379	3.950	919,621			45.235	12,671,491
GALLATIN					6.746	266,937			6.746	266,937
PARK	14.288	523,120	8.381	1,059,178					22.669	1,582,298
SWEET GRASS	-------	5,164	-------	-----------	-------	-----------	-------	-----------	-------	5,164
FD #10	14.288	528,284	8.381	1,059,178	6.746	266,937			29.415	1,854,399
BIG HORN		47,274	.776	270,440	20.898	814,200	1.644	103,008	23.318	1,234,922
CARBON				12,924						12,924
MUSSELSHELL				19,922						19,922
STILLWATER		26,541								26,541
TREASURE		21,629								21,629
YELLOWSTONE	10.896	5,135,171	-------	54,495	-------	-----------	-------	192,193	10.896	5,381,859
FD #11	10.896	5,230,615	.776	357,781	20.898	814,200	1.644	295,201	34.214	6,697,797
CUSTER	10.848	3,933,326	6.162	1,214,073					17.010	5,147,399
POWDER RIVER					.845	269,466			.845	269,466
ROSEBUD	7.156	1,606,142	-------	-----------	-------	-----------	-------	-----------	7.156	1,606,142
FD #12	18.004	5,539,468	6.162	1,214,073	.845	269,466			25.011	7,023,007
TOTAL	108.177	33,776,841	62.875	11,162,690	111.733	8,581,728	4.079	820,484	286.864	54,361,743

STATE OF MONTANA DEPARTMENT OF HIGHWAYS
PLANNING AND RESEARCH BUREAU

SUMMARY OF ROADWAY MILEAGE AWARDED BY SYSTEMS
DURING CALENDAR YEAR 1972
THIS TABLE SUMMARIZES ONLY NEW OR RECONSTRUCTED ROADWAYS
TABLE 2

JUNE 05, 1973

SYSTEM	MILEAGE	TOTAL COST	COST PER MILE	ANNUAL VEHICLE MILES	COST PER ANNUAL VEHICLE MILE
RURAL					
INTERSTATE RURAL	65.441	21,460,464	327,936	40,980,740	00.523
PRIMARY RURAL	42.030	7,994,453	190,208	10,586,095	00.755
SECONDARY RURAL	72.771	5,167,348	71,008	2,575,440	02.006
OTHER	4.079	193,748	47,498	420,480	00.460
SUBTOTAL RURAL	184.321	34,816,013	188,887	54,562,755	00.638
MUNICIPAL					
INTERSTATE MUNICIPAL	.728	576,747	792,234	378,505	01.523
PRIMARY MUNICIPAL	1.299	503,341	387,483	1,816,240	00.277
SECONDARY MUNICIPAL					00.000
OTHER					00.000
SUBTOTAL MUNICIPAL	2.027	1,080,088	532,850	2,194,745	00.492
TOTAL BY SYSTEM					
INTERSTATE	66.169	22,037,211	333,044	41,359,245	00.532
PRIMARY	43.329	8,497,794	196,122	12,402,335	00.685
SECONDARY	72.771	5,167,348	71,008	2,575,440	02.006
OTHER	4.079	193,748	47,498	420,480	00.460
GRAND TOTAL	186.348	35,896,101	192,629	56,757,500	00.632

STATE OF MONTANA DEPARTMENT OF HIGHWAYS
PLANNING AND RESEARCH BUREAU

SUMMARY OF TYPE OF CONSTRUCTION DURING CALENDAR YEAR 1972 BY SYSTEM

TABLE 3

JUNE 11, 1973

	INTERSTATE	
TYPE OF CONSTRUCTION	MILES	COST
RURAL		
NEW CONSTRUCTION	39.381	15,972,506
RECONSTRUCTION	1.240	69,482
ADD TWO LANES	24.820	5,418,476
MAJOR STRUCTURES		4,200,008
RESURFACE		
STAGE CONSTRUCTION	27.720	5,402,391
TRAFFIC CONTROL, SEEDING & FENCING		1,533,318
REST AREA, WEIGH STN & SENIC OVERLOOK		50,059
WIDENING ROADWAY		
OTHER		21,629
TOTAL		32,667,869
MUNICIPAL		
NEW CONSTRUCTION	.530	553,913
RECONSTRUCTION		
ADD TWO LANES	.198	22,834
MAJOR STRUCTURES		
RESURFACE		
STAGE CONSTRUCTION		
TRAFFIC CONTROL, SEEDING & FENCING		532,225
REST AREA, WEIGH STN & SENIC OVERLOOK		
WIDENING ROADWAY		
OTHER		
TOTAL		1,108,972
ALL CONSTRUCTION		
NEW CONSTRUCTION	39.911	16,526,419
RECONSTRUCTION	1.240	69,482
ADD TWO LANES	25.018	5,441,310
MAJOR STRUCTURES		4,200,008
RESURFACE		
STAGE CONSTRUCTION	27.720	5,402,391
TRAFFIC CONTROL, SEEDING & FENCING		2,065,543
REST AREA, WEIGH STN & SENIC OVERLOOK		50,059
WIDENING ROADWAY		
OTHER		21,629
TOTAL		33,776,841

STATE OF MONTANA DEPARTMENT OF HIGHWAYS
PLANNING AND RESEARCH BUREAU

SUMMARY OF TYPE OF CONSTRUCTION
DURING CALENDAR YEAR 1972
BY SYSTEM
TABLE 3A

JUNE 11, 1973

TYPE OF CONSTRUCTION	PRIMARY I	
	MILES	COST
RURAL		
NEW CONSTRUCTION	.360	239,676
RECONSTRUCTION	41.670	7,754,777
ADD TWO LANES		
MAJOR STRUCTURES		1,139,467
RESURFACE	18.955	543,118
STAGE CONSTRUCTION	.510	113,232
TRAFFIC CONTROL, SEEDING & FENCING		301,242
REST AREA, WEIGH STN & SENIC OVERLOOK		
WIDENING ROADWAY		
OTHER		
TOTAL		10,091,512
MUNICIPAL		
NEW CONSTRUCTION	.047	17,929
RECONSTRUCTION	1.252	485,412
ADD TWO LANES		
MAJOR STRUCTURES		
RESURFACE	.081	154,251
STAGE CONSTRUCTION		
TRAFFIC CONTROL, SEEDING & FENCING		393,086
REST AREA, WEIGH STN & SENIC OVERLOOK		
WIDENING ROADWAY		
OTHER		
TOTAL		1,050,678
ALL CONSTRUCTION		
NEW CONSTRUCTION	.407	257,605
RECONSTRUCTION	42.922	8,240,189
ADD TWO LANES		
MAJOR STRUCTURES		1,139,467
RESURFACE	19.036	697,369
STAGE CONSTRUCTION	.510	113,232
TRAFFIC CONTROL, SEEDING & FENCING		694,328
REST AREA, WEIGH STN & SENIC OVERLOOK		
WIDENING ROADWAY		
OTHER		
TOTAL		11,142,190

STATE OF MONTANA DEPARTMENT OF HIGHWAYS
PLANNING AND RESEARCH BUREAU

SUMMARY OF TYPE OF CONSTRUCTION
DURING CALENDAR YEAR 1972
BY SYSTEM
TABLE 3B

JUNE 11, 1973

TYPE OF CONSTRUCTION	PRIMARY II	
	MILES	COST
RURAL		
NEW CONSTRUCTION		
RECONSTRUCTION		
ADD TWO LANES		
MAJOR STRUCTURES		
RESURFACE		
STAGE CONSTRUCTION		
TRAFFIC CONTROL, SEEDING & FENCING		5,836
REST AREA, WEIGH STN & SENIC OVERLOOK		
WIDENING ROADWAY		
OTHER		
TOTAL		5,836
MUNICIPAL		
NEW CONSTRUCTION		
RECONSTRUCTION		
ADD TWO LANES		
MAJOR STRUCTURES		
RESURFACE		
STAGE CONSTRUCTION		
TRAFFIC CONTROL, SEEDING & FENCING		34,664
REST AREA, WEIGH STN & SENIC OVERLOOK		
WIDENING ROADWAY		
OTHER		
TOTAL		34,664
ALL CONSTRUCTION		
NEW CONSTRUCTION		
RECONSTRUCTION		
ADD TWO LANES		
MAJOR STRUCTURES		
RESURFACE		
STAGE CONSTRUCTION		
TRAFFIC CONTROL, SEEDING & FENCING		40,500
REST AREA, WEIGH STN & SENIC OVERLOOK		
WIDENING ROADWAY		
OTHER		
TOTAL		40,500

STATE OF MONTANA DEPARTMENT OF HIGHWAYS
PLANNING AND RESEARCH BUREAU

SUMMARY OF TYPE OF CONSTRUCTION
DURING CALENDAR YEAR 1972
BY SYSTEM
TABLE 3C

JUNE 11, 1973

TYPE OF CONSTRUCTION	SECONDARY	
	MILES	COST
RURAL		
NEW CONSTRUCTION	4.795	809,707
RECONSTRUCTION	67.976	4,357,641
ADD TWO LANES		
MAJOR STRUCTURES		1,677,159
RESURFACE	21.691	918,878
STAGE CONSTRUCTION	15.714	608,656
TRAFFIC CONTROL, SEEDING & FENCING		5,425
REST AREA, WEIGH STN & SENIC OVERLOOK		
WIDENING ROADWAY		
OTHER		
TOTAL		8,377,466
MUNICIPAL		
NEW CONSTRUCTION		
RECONSTRUCTION		
ADD TWO LANES		
MAJOR STRUCTURES		
RESURFACE	1.557	102,338
STAGE CONSTRUCTION		
TRAFFIC CONTROL, SEEDING & FENCING		
REST AREA, WEIGH STN & SENIC OVERLOOK		
WIDENING ROADWAY		
OTHER		101,924
TOTAL		204,262
ALL CONSTRUCTION		
NEW CONSTRUCTION	4.795	809,707
RECONSTRUCTION	67.976	4,357,641
ADD TWO LANES		
MAJOR STRUCTURES		1,677,159
RESURFACE	23.248	1,021,216
STAGE CONSTRUCTION	15.714	608,656
TRAFFIC CONTROL, SEEDING & FENCING		5,425
REST AREA, WEIGH STN & SENIC OVERLOOK		
WIDENING ROADWAY		
OTHER		101,924
TOTAL		8,581,728

STATE OF MONTANA DEPARTMENT OF HIGHWAYS
PLANNING AND RESEARCH BUREAU

SUMMARY OF TYPE OF CONSTRUCTION
DURING CALENDAR YEAR 1972
BY SYSTEM
TABLE 3D

JUNE 11, 1973

TYPE OF CONSTRUCTION	OTHER	
	MILES	COST
RURAL		
NEW CONSTRUCTION	1.644	103,008
RECONSTRUCTION	2.435	90,740
ADD TWO LANES		
MAJOR STRUCTURES		
RESURFACE		
STAGE CONSTRUCTION		
TRAFFIC CONTROL, SEEDING & FENCING		
REST AREA, WEIGH STN & SENIC OVERLOOK		56,010
WIDENING ROADWAY		
OTHER		6,963
TOTAL		256,721
MUNICIPAL		
NEW CONSTRUCTION		
RECONSTRUCTION		
ADD TWO LANES		
MAJOR STRUCTURES		
RESURFACE		
STAGE CONSTRUCTION		
TRAFFIC CONTROL, SEEDING & FENCING		559,790
REST AREA, WEIGH STN & SENIC OVERLOOK		
WIDENING ROADWAY		
OTHER		3,973
TOTAL		563,763
ALL CONSTRUCTION		
NEW CONSTRUCTION	1.644	103,008
RECONSTRUCTION	2.435	90,740
ADD TWO LANES		
MAJOR STRUCTURES		
RESURFACE		
STAGE CONSTRUCTION		
TRAFFIC CONTROL, SEEDING & FENCING		559,790
REST AREA, WEIGH STN & SENIC OVERLOOK		56,010
WIDENING ROADWAY		
OTHER		10,936
TOTAL		820,484

STATE OF MONTANA DEPARTMENT OF HIGHWAYS
PLANNING AND RESEARCH BUREAU

SUMMARY BY SURFACE TYPE
DURING CALENDAR YEAR 1972
TABLE 4 INTERSTATE SYSTEM JUNE 11, 1973

COST ITEM		STAGE CONSTR.	SURFACE TYPE BITUM. MIX	CONCRETE	ALL CONST.	MISC. ITEMS
GRADING	MILES	13.037	80.852		93.889	14.288
	COST	3,819,440	8,738,209		12,557,649	165,775
	COST/MILE	292,969	108,076		133,749	11,602
DRAINAGE	MILES	13.037	79.612		92.649	14.288
	COST	1,064,754	2,315,043		3,379,797	127,160
	COST/MILE	81,671	29,079		36,479	8,899
FOUNDATION	MILES		80.852		80.852	
	COST	275	2,997,245		2,997,520	
	COST/MILE		37,070		37,074	
SURFACING	MILES		80.852		80.852	14.288
	COST	6,051	6,050,708		6,056,759	247,712
	COST/MILE		74,836		74,911	17,337
EROSION CTL.	MILES	13.037	80.852		93.889	14.288
	COST	182,044	880,908		1,062,952	45,124
	COST/MILE	13,963	10,895		11,321	3,158
TRAFFIC CTL.	MILES	13.037	80.852		93.889	14.288
	COST	11,829	962,680		974,509	1,332,397
	COST/MILE	907	11,906		10,379	93,252
FENCING	MILES	13.037	66.857		79.894	
	COST	133,841	462,496		596,337	
	COST/MILE	10,266	6,917		7,464	
MISC.	MILES	13.037	77.064		90.101	
	COST	4,800	24,000		28,800	
	COST/MILE	368	311		319	
BRIDGES	SQ. FEET					248,276
	COST					4,208,008
	COST/SQ. FOOT					16.948
ALL ITEMS	MILES	13.037	80.852		93.889	14.288
	COST	5,223,034	22,431,289		27,654,323	6,432,320
	COST/MILE	400,631	277,436		294,542	450,190

STATE OF MONTANA DEPARTMENT OF HIGHWAYS
PLANNING AND RESEARCH BUREAU

SUMMARY BY SURFACE TYPE
DURING CALENDAR YEAR 1972

TABLE 4A — PRIMARY SYSTEM — JUNE 11, 1973

COST ITEM		SURFACE TYPE			ALL CONST.	MISC. ITEMS
		GRAVEL	BITUM. MIX	CONCRETE		
GRADING	MILES	.510	50.643	.081	51.234	
	COST	98,784	2,253,345	22,768	2,374,897	
	COST/MILE	193,694	44,494	281,086	46,353	
DRAINAGE	MILES	.510	43.282	.081	43.873	
	COST	3,760	1,337,187	5,953	1,346,900	
	COST/MILE	7,372	30,894	73,493	30,699	
FOUNDATION	MILES		50.643	.081	50.724	
	COST		1,874,664	14,040	1,888,704	
	COST/MILE		37,017	173,333	37,234	
SURFACING	MILES		62.284	.081	62.365	
	COST		2,916,629	40,833	2,957,462	
	COST/MILE		46,827	504,111	47,421	
RDSIDE DEVEL.	MILES		.476	.081	.557	
	COST		924	7,083	8,007	
	COST/MILE		1,941	87,444	14,375	
EROSION CTL.	MILES	.510	50.643		51.153	
	COST	6,517	267,791		274,308	
	COST/MILE	12,778	5,287		5,362	
TRAFFIC CTL.	MILES	.510	62.284	.081	62.875	
	COST	1,000	386,182	63,574	450,756	726,431
	COST/MILE	1,960	6,200	784,864	7,169	
FENCING	MILES	.510	31.541		32.051	
	COST	3,171	59,000		62,171	8,397
	COST/MILE	6,217	1,870		1,939	
MISC.	MILES		39.715		39.715	
	COST		14,288		14,288	
	COST/MILE		359		359	
BRIDGES	SQ. FEET					56,162
	COST					1,147,067
	COST/SQ. FOOT					20.424
ALL ITEMS	MILES	.510	62.284	.081	62.875	
	COST	113,232	9,110,010	154,251	9,377,493	1,881,895
	COST/MILE	222,023	146,265	1,904,333	149,145	

STATE OF MONTANA DEPARTMENT OF HIGHWAYS
PLANNING AND RESEARCH BUREAU

SUMMARY BY SURFACE TYPE
DURING CALENDAR YEAR 1972

TABLE 4C SECONDARY SYSTEM JUNE 11, 1973

COST ITEM		SURFACE TYPE			ALL	MISC.
		GRAVEL	BITUM. MIX	CONCRETE	CONST.	ITEMS
GRADING	MILES	12.693	73.782		86.475	
	COST	679,681	994,476		1,674,157	
	COST/MILE	53,547	13,478		19,360	
DRAINAGE	MILES	12.693	45.839		58.532	
	COST	203,819	424,996		628,815	
	COST/MILE	16,057	9,271		10,743	
FOUNDATION	MILES	4.795	99.040		103.835	
	COST	26,224	827,434		853,658	
	COST/MILE	5,469	8,354		8,221	
SURFACING	MILES	4.795	99.040		103.835	
	COST	82,777	2,835,829		2,918,606	
	COST/MILE	17,263	28,633		28,108	
RDSIDE DEVEL.	MILES		.161		.161	
	COST		1,891		1,891	
	COST/MILE		11,745		11,745	
EROSION CTL.	MILES	12.693	68.929		81.622	
	COST	141,878	247,725		389,603	
	COST/MILE	11,177	3,593		4,773	
TRAFFIC CTL.	MILES	12.693	99.040		111.733	
	COST	30,920	223,187		254,107	7,925
	COST/MILE	2,435	2,253		2,274	
FENCING	MILES	12.693	36.789		49.482	
	COST	34,251	91,067		125,318	
	COST/MILE	2,698	2,475		2,532	
MISC.	MILES	11.743	72.961		84.704	
	COST	2,400	8,800		11,200	99,924
	COST/MILE	204	120		132	
BRIDGES	SQ. FEET					57,402
	COST					1,677,959
	COST/SQ. FOOT					29.231
ALL ITEMS	MILES	12.693	99.040		111.733	
	COST	1,201,950	5,655,405		6,857,355	1,785,808
	COST/MILE	94,693	57,102		61,372	

STATE OF MONTANA DEPARTMENT OF HIGHWAYS
PLANNING AND RESEARCH BUREAU

SUMMARY OF ROADWAY MILEAGE AWARDED BY NUMBER OF TRAFFIC LANES DURING CALENDAR YEAR 1972
TABLE 5

JUNE 11, 1973

NO. LANES	MILES	COST	COST/MILE
INTERSTATE SYSTEM			
2	8.254	1,238,668	150,068
4	57.915	20,798,543	359,121
TOTAL	66.169	22,037,211	333,044
PRIMARY SYSTEM			
2	41.070	7,439,950	181,152
4	2.259	1,057,844	468,279
TOTAL	43.329	8,497,794	196,122
SECONDARY SYSTEM			
2	72.771	5,167,348	71,008
4			
TOTAL	72.771	5,167,348	71,008
ALL SYSTEMS			
2	122.095	13,845,966	113,403
4	60.174	21,856,387	363,219
TOTAL	182.269	35,702,353	195,877

STATE OF MONTANA DEPARTMENT OF HIGHWAYS
PLANNING AND RESEARCH BUREAU
SUMMARY OF STRUCTURES BY TYPE
DURING CALENDAR YEAR 1972

TABLE 6 INTERSTATE SYSTEM JUNE 04, 1973

BRIDGE TYPE	CODE	NO. OF STRUCTURES	SQ. FT. STRUCTURES	TOTAL COST	COST / SQ. FOOT
CONC. SLAB	X220	2	6,236	194,135	31.131
COMP. S/C GIRD.	X071	1	12,180	322,664	26.491
	X771	1	11,704	300,536	25.678
CONC. PRESTR. GIRD.	X081	2	23,898	418,619	17.516
	X281	8	127,474	1,785,610	14.007
	X481	1	8,100	148,984	18.393
	X781	5	58,684	1,037,460	17.678
		20	248,276	4,208,008	16.948

STATE OF MONTANA DEPARTMENT OF HIGHWAYS
PLANNING AND RESEARCH BUREAU
SUMMARY OF STRUCTURES BY TYPE
DURING CALENDAR YEAR 1972

TABLE 6A PRIMARY I SYSTEM JUNE 04, 1973

BRIDGE TYPE	CODE	NO. OF STRUCTURES	SQ. FT. STRUCTURES	TOTAL COST	COST / SQ. FOOT
CONC. SLAB	X020	2	10,110	263,847	26.097
CONC. GIRD	X021	1	3,772	52,805	13.999
CONC. PRESTR. GIRD.	X081	4	28,156	586,873	20.843
	X981	1	14,124	243,542	17.243
		8	56,162	1,147,067	20.424

STATE OF MONTANA DEPARTMENT OF HIGHWAYS
PLANNING AND RESEARCH BUREAU
SUMMARY OF STRUCTURES BY TYPE
DURING CALENDAR YEAR 1972

TABLE 6C SECONDARY SYSTEM JUNE 04, 1973

BRIDGE TYPE	CODE	NO. OF STRUCTURES	SQ. FT. STRUCTURES	TOTAL COST	COST / SQ. FOOT
CONC. SLAB	X020	1	750	43,543	58.057
CONC. PRESTR. GIRD.	X081	5	56,652	1,634,416	28.850
		6	57,402	1,677,959	29.231

STATE OF MONTANA DEPARTMENT OF HIGHWAYS
PLANNING AND RESEARCH BUREAU
SUMMARY OF STRUCTURES BY TYPE
DURING CALENDAR YEAR 1972

TABLE 6D ALL SYSTEMS JUNE 04, 1973

BRIDGE TYPE	CODE	NO. OF STRUCTURES	SQ. FT. STRUCTURES	TOTAL COST	COST / SQ. FOOT
CONC. SLAB	X020	3	10,860	307,390	28.304
	X220	2	6,236	194,135	31.131
CONC. GIRD	X021	1	3,772	52,805	13.999
COMP. S/C GIRD.	X071	1	12,180	322,664	26.491
	X771	1	11,704	300,536	25.678
CONC. PRESTR. GIRD.	X081	11	108,706	2,639,908	24.284
	X281	8	127,474	1,785,610	14.007
	X481	1	8,100	148,984	18.393
	X781	5	58,684	1,037,460	17.678
	X981	1	14,124	243,542	17.243
		34	361,840	7,033,034	19.436

STATE OF MONTANA DEPARTMENT OF HIGHWAYS
PLANNING AND RESEARCH BUREAU

SUMMARY OF ROADWAY MILEAGE AWARDED BY AVERAGE DAILY TRAFFIC (NEW OR RECONSTRUCTED ROADWAY ONLY) DURING CALENDAR YEAR 1972

TABLE 7

JUNE 04, 1973

SYSTEM - INTERSTATE

AVERAGE DAILY TRAFFIC	MILEAGE	COST	COST PER MILE
0001-0049	.000		
0050-0099	.000		
0100-0199	.000		
0200-0299	.000		
0300-0399	.000		
0400-0499	.000		
0500-0999	5.258	$ 1,568,451	$ 298,298
1000-1499	14.560	$ 5,624,231	$ 386,279
1500-1999	28.553	$ 8,141,785	$ 285,146
2000-2999	17.798	$ 6,702,744	$ 376,600
3000-4999	.000		
5000-OVER	.000		
TOTAL	66.169	$ 22,037,211	$ 333,044

STATE OF MONTANA DEPARTMENT OF HIGHWAYS
PLANNING AND RESEARCH BUREAU

SUMMARY OF ROADWAY MILEAGE AWARDED BY AVERAGE DAILY TRAFFIC (NEW OR RECONSTRUCTED ROADWAY ONLY) DURING CALENDAR YEAR 1972

TABLE 7 A

JUNE 04, 1973

SYSTEM - PRIMARY I

AVERAGE DAILY TRAFFIC	MILEAGE	COST	COST PER MILE
0001-0049	.000		
0050-0099	.000		
0100-0199	.000		
0200-0299	9.987	$ 1,279,845	$ 128,151
0300-0399	14.978	$ 2,705,439	$ 180,627
0400-0499	6.162	$ 1,214,073	$ 197,025
0500-0999	.407	$ 257,605	$ 632,936
1000-1499	7.895	$ 1,610,396	$ 203,976
1500-1999	.000		
2000-2999	.000		
3000-4999	3.900	$ 1,430,436	$ 366,778
5000-OVER	.000		
TOTAL	43.329	$ 8,497,794	$ 196,122

STATE OF MONTANA DEPARTMENT OF HIGHWAYS
PLANNING AND RESEARCH BUREAU

SUMMARY OF ROADWAY MILEAGE AWARDED BY AVERAGE DAILY TRAFFIC (NEW OR RECONSTRUCTED ROADWAY ONLY) DURING CALENDAR YEAR 1972

TABLE 7 C

JUNE 04, 1973

SYSTEM - SECONDARY

AVERAGE DAILY TRAFFIC	MILEAGE	COST	COST PER MILE
0001-0049	5.848	$ 515,894	$ 88,217
0050-0099	50.864	$ 2,599,755	$ 51,111
0100-0199	15.898	$ 1,881,329	$ 118,337
0200-0299	.000		
0300-0399	.000		
0400-0499	.000		
0500-0999	.000		
1000-1499	.000		
1500-1999	.000		
2000-2999	.000		
3000-4999	.161	$ 170,370	$ 1,058,198
5000-OVER	.000		
TOTAL	72.771	$ 5,167,348	$ 71,008

STATE OF MONTANA DEPARTMENT OF HIGHWAYS
PLANNING AND RESEARCH BUREAU

SUMMARY OF ROADWAY MILEAGE AWARDED BY AVERAGE DAILY TRAFFIC (NEW OR RECONSTRUCTED ROADWAY ONLY) DURING CALENDAR YEAR 1972

TABLE 7D

JUNE 04, 1973

SYSTEM - OTHER

AVERAGE DAILY TRAFFIC	MILEAGE	COST	COST PER MILE
0001-0049	.000		
0050-0099	.000		
0100-0199	.000		
0200-0299	.000		
0300-0399	.000		
0400-0499	.000		
0500-0999	1.644	$ 103,008	$ 62,656
1000-1499	.000		
1500-1999	.000		
2000-2999	.000		
3000-4999	.000		
5000-OVER	.000		
TOTAL	1.644	$ 103,008	$ 62,656

STATE OF MONTANA DEPARTMENT OF HIGHWAYS
PLANNING AND RESEARCH BUREAU

SUMMARY OF CONTRACTED AND NON-CONTRACTED COSTS BY SYSTEM DURING CALENDAR YEAR 1972

TABLE 8

JUNE 04, 1973

SYSTEM	CONTRACTED COST	NON CONTRACTED COST	TOTAL
INTERSTATE	$ 33,776,841	$ 3,718,403	$ 37,495,244
PRIMARY I	$ 11,142,190	$ 1,198,543	$ 12,340,733
PRIMARY II	$ 40,500	$ 4,047	$ 44,547
SECONDARY	$ 8,581,728	$ 925,729	$ 9,507,457
OTHER	$ 820,484	$ 86,013	$ 906,497
TOTAL	$ 54,361,743	$ 5,932,735	$ 60,294,478